IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for scheduling a plurality of program units, the method comprising:

starting a process within an operating system executing in a system having a plurality of multiple processor units, each of the multiple processor units having a plurality of processors;

starting the plurality of program units within the operating system, the plurality of program units associated with the process, wherein the plurality of program units execute on two or more of the plurality of multiple processor units; and

upon the occurrence of a context shifting event for a first program unit of the plurality of program units, performing the tasks of:

migrating each of one or more of the plurality of program units that are not executing on a selected multiple processor unit ~~from one or more~~ of the plurality of multiple processing units to ~~one of the plurality of multiple processing units such that the plurality of program units associated with the process are executing on the same~~ the selected multiple processor unit,

synchronizing the scheduling of each of the plurality of program units, [[and]]

setting the context shifting event in a context of each of the plurality of program units ~~such that each of the plurality of program units process~~ to the same context shifting event as the first program unit, and

processing by each of the plurality of program units the same context shifting event.

2. (Original) The method of claim 1, wherein the program unit comprises a thread.

3.-4. (Canceled)

5. (Original) The method of claim 1, wherein the context shifting event comprises an exception.

6. (Original) The method of claim 5 wherein the exception comprises a signal.

7. (Original) The method of claim 1 wherein the context shifting event comprises a non-local goto.

8. (Original) The method of claim 1, wherein the context shifting event comprises a system call.

9. (Currently Amended) A system for scheduling a plurality of program units, the system comprising:

a plurality of multiple processor units, each multiple processor unit having a plurality of processors, wherein each of the plurality of processors on a multiple processor unit shares cache memory;

a memory coupled to the plurality of multiple processor units; and

an operating environment stored in the memory and executed by at least one of the processors wherein at least one of the processors performs the tasks of:

start a process,

start the plurality of program units within an operating system, the plurality of program units associated with the process, wherein the plurality of program units execute on two or more of the plurality of multiple processor units, [[and]]

upon the occurrence of a context shifting event for a first program unit of the plurality of program units, at least one of the processors performs the tasks of:

migrate each of one or more of the plurality of program units that are not executing on a selected multiple processor unit ~~from one or more~~ of the plurality of multiple processing units to ~~one of the plurality of multiple processing units such that the plurality of program units associated with the process are executing on the same~~ the selected multiple processor unit,

synchronize the scheduling of each of the plurality of program units, and set the context shifting event in a context of each of the plurality of program units ~~such that the plurality of program units process~~ to the same context shifting event as the first program unit,

wherein each of the plurality of program units process the same context shifting event.

10. (Original) The system of claim 9, wherein the program unit comprises a thread.

11.-12. (Canceled)

13. (Original) The system of claim 9, wherein the context shifting event comprises an exception.

14. (Original) The system of claim 13 wherein the exception comprises a signal.

15. (Original) The system of claim 9 wherein the context shifting event comprises a non-local goto.

16. (Original) The system of claim 9, wherein the context shifting event comprises a system call.

17. (Currently Amended) A computer storage medium having computer-executable instructions for performing a method for scheduling a plurality of program units, the method comprising:

starting a process within an operating system executing in a system having a plurality of multiple processor units, each of the multiple processor units having a plurality of processors;

starting the plurality of program units within the operating system, the plurality of program units associated with the process, wherein the plurality of program units execute on two or more of the plurality of multiple processor units; and upon the occurrence of a context shifting event for a first program unit of the plurality of program units, performing the tasks of:

migrating each of one or more of the plurality of program units that are not executing on a selected multiple processor unit ~~from one or more~~ of the plurality of multiple processing units to ~~one of the plurality of multiple processing units such that the plurality of program units associated with the process are executing on the same~~ the selected multiple processor unit,

synchronizing the scheduling of each of the plurality of program units, and

setting the context shifting event in a context of each of the plurality of program units ~~such that the plurality of program units process~~ to the same context shifting event as the first program unit, and

processing by each of the plurality of program units the same context shifting event.

18. (Previously Presented) The computer storage medium of claim 17, wherein the program unit comprises a thread.

19.-20. (Canceled)

21. (Previously Presented) The computer storage medium of claim 17, wherein the context shifting event comprises an exception.

22. (Previously Presented) The computer storage medium of claim 21 wherein the exception comprises a signal.

23. (Previously Presented) The computer storage medium of claim 17 wherein the context shifting event comprises a non-local goto.

24. (Previously Presented) The computer storage medium of claim 17, wherein the context shifting event comprises a system call.